



(11) **EP 1 107 500 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
21.04.2004 Bulletin 2004/17

(51) Int Cl.7: **H04L 1/20**

(43) Date of publication A2:
13.06.2001 Bulletin 2001/24

(21) Application number: **00309891.0**

(22) Date of filing: **07.11.2000**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
 Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **Butler, Graham**
Chilwell, Nottingham NG9 5DA (GB)

(74) Representative: **Hoste, Colin Francis**
Marconi Intellectual Property
Crompton Close
Basildon, Essex SS14 3BA (GB)

(30) Priority: **11.12.1999 GB 9929250**

(71) Applicant: **Marconi UK Intellectual Property Ltd**
Coventry, CV3 1HJ (GB)

(54) **High dynamic range error rate monitor**

(57) There is provided an error rate monitor (10) incorporating a counter (30) which is incremented as errors are detected in a data stream passing through an interface unit (20) connected to the counter (30). The counter (30) is also simultaneously decremented at a rate proportional to an exponential of a value presently

stored in the counter (30). The monitor (10) thereby provides from the value stored in the counter (30) a measure of error rate in the data stream, the value substantially proportional to a logarithm of error rate in the data stream, thereby providing the monitor (10) with a relatively large error rate monitoring dynamic range.

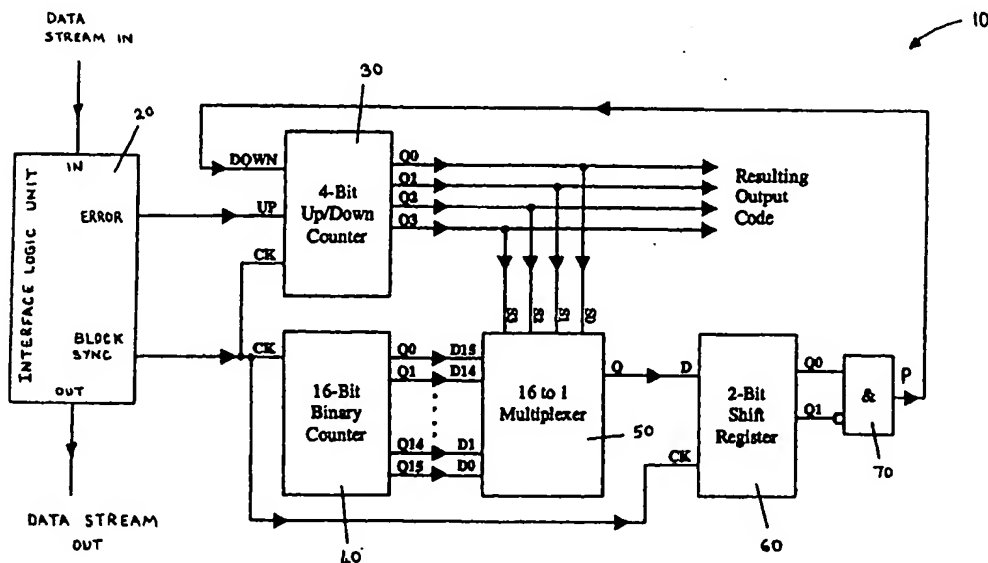


Fig. 1

EP 1 107 500 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 30 9891

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 271 011 A (MCMULLAN JR JAY C ET AL) 14 December 1993 (1993-12-14)	1-5,11	H04L1/20
Y	* abstract *	9,10	
	* column 9, line 34 - column 10, last paragraph *		
A	* figure 5 *	6-8	

Y	US 5 513 185 A (SCHMIDT DOUGLAS C) 30 April 1996 (1996-04-30)	9,10	H04L
	* abstract *		
	* column 1, line 22 - line 25 *		

A	KEREKES I ; ANIDO G ; BRADLOW H S ; EYERS T: "Dimensioning of leaky buckets to be used as monitors" ELECTRONICS LETTERS, vol. 29, 21 January 1993 (1993-01-21), pages 245-246, XP002271033 UK * the whole document *	1-11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Place of search Munich		Date of completion of the search 20 February 2004	Examiner Stolte, N
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

EPO FORM 1503 (03.02 (P04CO1))

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 30 9891

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-02-2004

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5271011	A	14-12-1993	AU	3805193 A		21-10-1993
			CN	1081038 A		19-01-1994
			MX	9301468 A1		31-01-1994
			WO	9319545 A1		30-09-1993

US 5513185	A	30-04-1996	CA	2105544 A1		24-05-1994
			DE	69328468 D1		31-05-2000
			DE	69328468 T2		28-09-2000
			EP	0599515 A1		01-06-1994
			JP	2813119 B2		22-10-1998
			JP	6216972 A		05-08-1994
